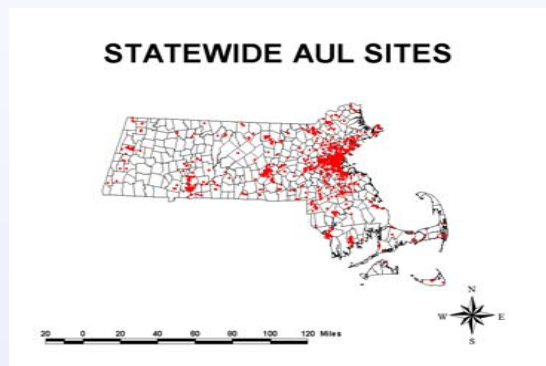


MASSACHUSETTS' Approach Toward Monitoring and Enforcement of Institutional Controls

Wednesday, 05 April 2006

Institutional Controls Roundtable & Training
Co-sponsors: EPA, ASTSWMO and ICMA
April 4-6 – Tucson, Arizona



Thomas M. Potter
Section Chief, Audit Coordinator
Commonwealth of Massachusetts
Department of Environmental Protection
Bureau of Waste Site Cleanup
One Winter Street, 7th Floor, Boston, MA 02108
Phone: (617) 292-5628

Email: Thomas.Potter@state.ma.us

Web: <http://www.mass.gov/dep/cleanup/index.htm>

In Massachusetts

- A **Privatized** Waste Site Cleanup program for state sites established in 1993.
- Established a “**Licensed Site Professional**” (LSP) to manage cleanups on behalf of state.
- MA Institutional Controls implemented at **Cleanup End Point** (Response Action Outcome)
- **Activity & Use Limitations** or AULs are Massachusetts Institutional Controls.



Licensed Site Professional (LSP)

<http://mass.gov/lsp/lsphome.htm>

- An individual with a college degree in science or engineering who has:
- At least 5 years of experience conducting and overseeing hazardous waste site assessment and remediation at the decision-making level
- At least 8 years of total professional experience
- Good moral character
- Passed Board's exam (technical and regulatory)
- Continuing Education requirements



Three Types of AULs

Voluntary:

1. Notice of Activity and Use Limitation (~1,800)
2. Grant of Environmental Restriction (~12)

Involuntary:

3. DEP-imposed Environmental Restriction (0)
- MassDEP “Guidance on Implementing Activity and Use Limitations” issued 5/1999



Grants v. Notices

Grants

- Greater control
- Legally enforceable contract
- Enforceable by DEP under MCP
- Subordination Agreements ensures priority of AUL over prior interests in property

Notices

- Lesser control
- Not a legally enforceable contract
- Enforceable by DEP under MCP
- No Subordination Agreements



Grants vs. Notices (cont.)

Grants

- Department review
- Subject to DEP audit
- Filing Requirements for DEP review
- Filing Fees
- Easements granted to DEP - access rights and rights to conduct investigations of Restricted Area and/or remediation activities

Notices

- No Department review
- Subject to DEP audit
- No filing requirements for DEP Review
- No filing Fees
- No easements granted to DEP
- No groundwater



The AUL Notice

- Document, recorded at the registry of deeds or registered with the land court
- Prepared and implemented in same manner as other real estate documents
- Provides Notice of residual OHM
- Specifies Permitted uses/activities
- Specifies Inconsistent uses/activities (GRANT = Restricted)
- Specifies restricted area
- Specifies Obligation and Maintenance Conditions
- Establishes duties to evaluate future proposed activities, site use change, and conduct response actions, if necessary

What Does a NOTICE Look Like?

NOTICE OF ACTIVITY AND USE LIMITATION **M.G.L. c. 21E, §6 and 310 CMR 40.0000**

Disposal Site Name: Titan Tool Company
DEP Release Tracking No.(s): 3-0000

This Notice of Activity and Use Limitation ("Notice") is made as of this 3rd day of July, 19 97, by Titan Tool Company, Inc., a Massachusetts corporation having a principal place of business at 345 Main Street, Siteville, Massachusetts 99999, together with its successors and assigns (collectively, "Owner").

W I T N E S S E T H:

WHEREAS, Titan Tool Company, Inc., of Siteville, Essex County, Massachusetts, is the owner in fee simple of that certain parcel of land located in Siteville, Essex County, Massachusetts, with the buildings and improvements thereon ("Property");

WHEREAS, said parcel of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The property is shown on a plan recorded with Essex County Registry of Deeds (Southern District) in Plan Book 150, Plan 10.

WHEREAS, a portion of the Property ("Portion of the Property") is subject to this Notice of Activity and Use Limitation. The Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown as the "AUL Area" on the aforementioned plan recorded with said Deeds in Plan Book 150, Plan 10.

WHEREAS, the Portion of the Property comprises part of a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site (to the extent such boundaries have been established). Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Portion of the Disposal Site in accordance with M.G.L. c.21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or (b) the restriction of certain activities occurring in, on, through, over or under the Portion of the Property. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion"), dated July 2, 1997, (which is attached hereto as Exhibit C and made a part hereof);

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in said AUL Opinion are as follows:

1. **Permitted Activities and Uses Set Forth in the AUL Opinion.** The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Portion of the Property:

- (i) Commercial and/or industrial uses and activities associated therewith, including, but not limited to, pedestrian and/or vehicular traffic, landscaping, and routine maintenance of

landscaped areas, which do not cause and/or result in the disturbance and/or the re-location of petroleum-contaminated soil located at 4 to 8 feet below surface grade;

- (ii) Short-term (three months or less) underground utility and/or construction activities including, but not limited to, excavation (including emergency repair of underground utility lines), which are likely to disturb petroleum-contaminated soil located at 4 to 8 feet below surface grade, provided that such activities are conducted in accordance with Obligations/Conditions (i) and (ii) in Section 3 of this Activity and Use Limitation Opinion ("Opinion"), the soil management procedures of the MCP cited at 310 CMR 40.0030, and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;
- (iii) Activities and uses which are not identified in this Opinion as being inconsistent with maintaining a condition of No Significant Risk; and
- (iv) Such other activities and uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare, or the environment than the activities and uses set forth in this Paragraph.

2. **Activities and Uses Inconsistent with the AUL Opinion.** Activities and uses which are inconsistent with the objectives of this Notice, and which, if implemented at the Portion of the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or in a substantial hazard, are as follows:

- (i) Use of the portion of the property as a residence, school (with the exception of adult education), daycare, nursery, recreational area (such as a park or athletic fields), and/or any other use at which a child's presence is likely;
- (ii) Any activity including, but not limited to, excavation, which is likely to disturb petroleum-contaminated soil located at 4 to 8 feet below surface grade associated with underground utility and/or construction work, without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (I) and (ii) of Section 3 of the AUL;
- (iii) Any activity which is likely to disturb petroleum-contaminated soil located at 4 to 8 feet below surface grade for a period of time greater than three months, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations (i) and (ii) of Section 3 of this AUL; and
- (iv) Relocation of petroleum-contaminated soil located at 4 to 8 feet below surface grade, unless such relocation is first evaluated by an LSP who renders an Opinion stating that such relocation is consistent with maintaining a condition of No Significant Risk.

3. **Obligations and Conditions Set Forth in the AUL Opinion.** If applicable, obligations and/or conditions to be undertaken and/or maintained at the Portion of the Property to maintain a condition of No Significant Risk as set forth in the AUL Opinion shall include the following:

- (i) A Soil Management Plan must be prepared by a Licensed Site Professional (LSP) prior to the commencement of any activity which is likely to disturb petroleum-contaminated soil located at 4 to 8 feet below surface grade. The Soil Management Plan should describe appropriate soil management, characterization, storage, transport and disposal procedures in accordance with the provisions of the MCP cited at 310 CMR 40.0030 et seq. Workers who may come in contact with the petroleum-contaminated soil should be appropriately trained on the

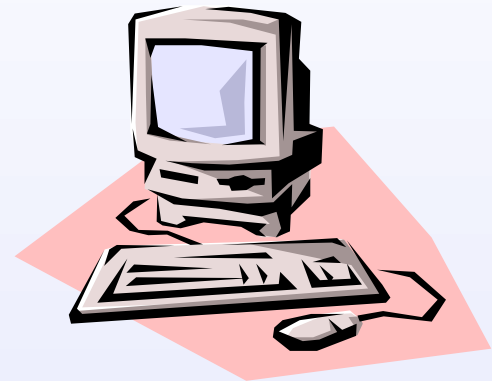
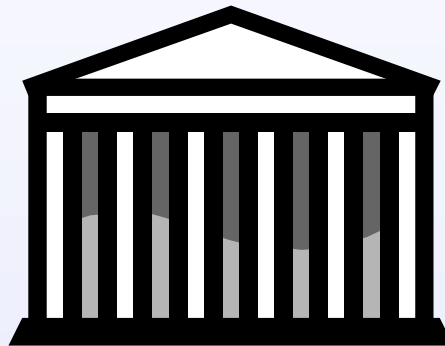


Monitoring & Enforcement

“A two-tiered Approach”

1. Public Notice and Outreach
2. Audits & Enforcement

PUBLIC NOTICE AND OUTREACH

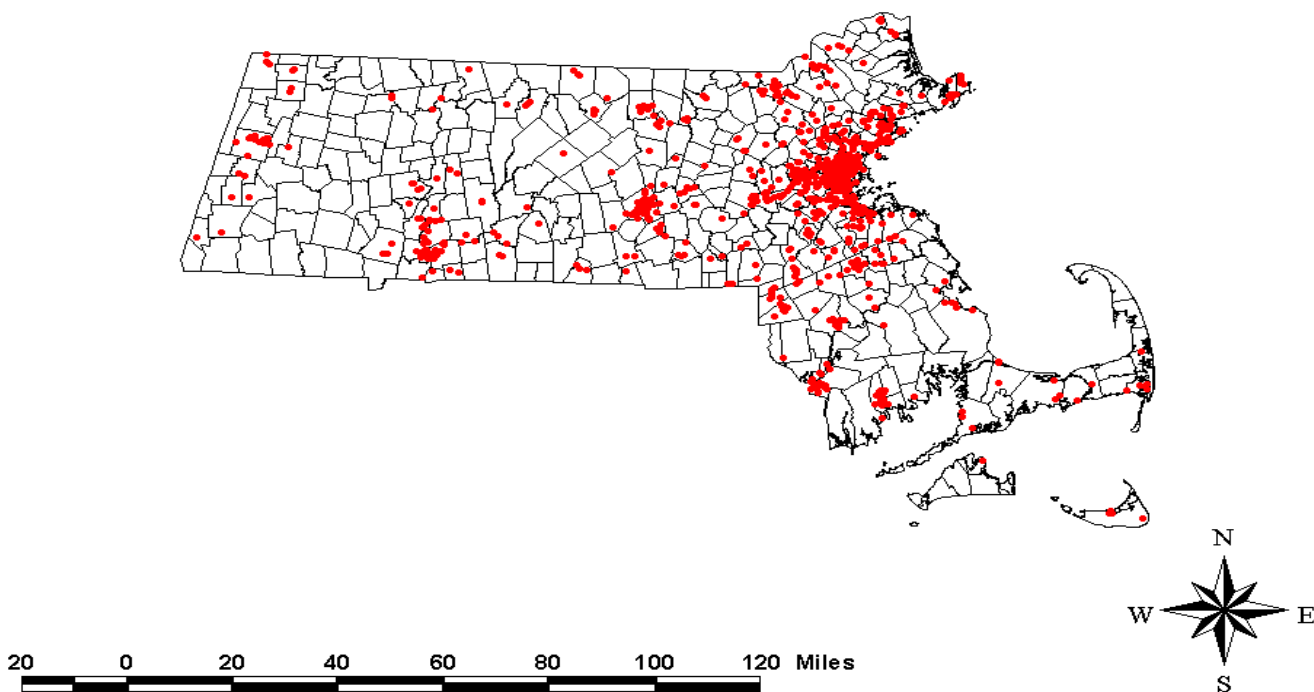


Massachusetts AULs

- Implemented at ~9% of waste sites achieving a Cleanup End Point or RAO
- 91% on commercial or industrial properties
- 9% on residential properties
- ~ 240 Towns/Villages across State (of 351 or 68%)
- ~ 100 filed each year (declining)



STATEWIDE AUL SITES



Registry of Deeds

- Notice filed in County where AUL located
- Keeps information in property title
- Requirement to include marginal references
- Requirement to reference in future deeds

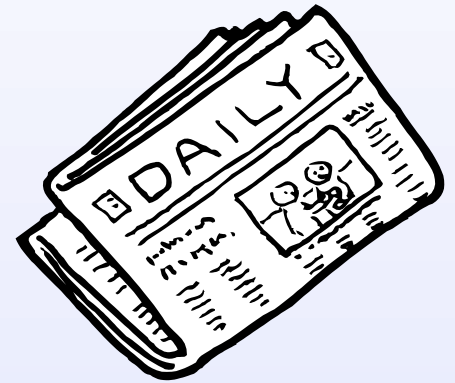


Local Officials

- Must be provided in writing along with a complete copy of the AUL Notice within 30 days of recording/registering the AUL to:
 - Chief Municipal Official (CMO)
 - Board of Health (BOH)
 - Building Code Enforcement Official
 - Zoning Official

Legal Notices

- Where?
 - Published in local newspaper
 - Copy sent to local officials
- What?
 - Identifies the site
 - Party conducting the cleanup
 - How to get information

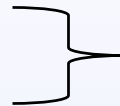


MassDEP Resources

- Online:

<http://www.mass.gov/dep/cleanup/sites.htm>

- Sites Database
- List of AUL Sites
- GIS Data Layer



ICMA Web Ring

- Regional Service Centers File Reviews:

- Western: Springfield
- Central: Worcester
- Northeast: Wilmington
- Southeast: Lakeville





Site/Reportable Release Look Up

- RTN: -
- Site Name/Location Aid:
- Street: North
- City: ABINGTON
- Status:
- Chemical Type:

Search Results

Release Tracking Number(RTN)	City/Town	Release Address	Site Name/Location Aid	Reporting Category	Notification Date	Compliance Status	Date	Phase	RAO Class	Chemical Type	Release Tracking Number(RTN)
4-0000314	ABINGTON	380 NORTH AVE N	HUMBOLDT PRESS		4/15/1987	RAO	8/8/1997	PHASE III	A3	Hazardous Material	4-0000314
4-0012246	ABINGTON	344-346 NORTH AVE	NO LOCATION AID	120 DY	5/28/1996	RAO	5/28/1996	NO PHASE	B1	Hazardous Material	4-0012246
4-0012602	ABINGTON	164 NORTH AVE	MOBIL SERVICE STN	72 HR	10/28/1996	RAO	1/9/1997	NO PHASE	A2	Oil	4-0012602
4-0013132	ABINGTON	201 NORTH QUINCY ST	JUNKYARD	TWO HR	7/1/1997	DEF TIER 1B	7/8/1998	NO PHASE		Oil	4-0013132
4-0013633	ABINGTON	385 NORTH AVE	JOHN STREET	120 DY	1/15/1998	RAO	7/6/1999	PHASE II	A2	Oil	4-0013633
Total of 5 Records Matched.											



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File Edit View Document Tools Window Help						
Save a Copy Search 91% Help PDF eBooks. Read one for free!						
Bookmarks Pages Attachments Comments						
Town	Address	RTN	Site Name	BOOK	PAGE	Registry Web Link
CAMBRIDGE						
	281 BROADWAY	3-0012975	NO LOCATION AID			Middlesex Southern
			AUL amended on 3/8/2002 AUL received on 6/3/1996			
	900 CAMBRIDGE ST	3-0014074	BETWEEN WILLOW & WINDSOR STREETS			
			AUL received on 8/5/1997			
	100 CONCORD AVE	3-0010567	ST PETERS CHURCH	25207	448	
			AUL amended on 7/18/2002 AUL received on 3/3/1995			
	450 CONCORD AVE	3-0013583	NATIONAL GUARD ARMORY	36543	285	
			AUL received on 11/14/2002			
	615 CONCORD AVE	3-0012611	NO LOCATION AID	26436	340	
			AUL amended on 7/12/2002 AUL received on 6/28/1996			
	617 CONCORD AVE	3-0010689	NO LOCATION AID			
			AUL amended on 2/20/2002 AUL received on 12/28/1995			
	689 CONCORD AVE	3-0003109	PROPERTY			
			AUL terminated on 8/23/2001 AUL received on 8/7/1996			
	203 CONCORD TPKE	3-0000783	PROPERTY			
			AUL received on 5/15/1997			
	16 EDMUNDS ST	3-0010698	NO LOCATION AID			
			AUL received on 1/24/1995			
	47 ERIE ST	3-0015692	NO LOCATION AID			
			AUL received on 3/29/2001			
MADEP Sites with Activity Use Limitations, 1/10/2006 4:46:29						
Page 49 of 210						
61 of 222						



Registry Research

- Available Online:
 - www.masslandrecords.com
- Search By:
 - Owner
 - Location
 - Book & Page Number
 - [Example: BK/PG 36543/285
Middlesex South County (Cambridge), RTN 3-13583]

Registry of Deeds - Microsoft Internet Explorer provided by Dept. Environmental Protection

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address <http://www.masslandrecords.com/malr/controller> Go

Bk: 98543 Pg: 205
 Record: 081770002
 Document: 00001020 Page: 1 of 22

FORM 1075

NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c.21E, §6 and 310 CMR 40.0000

Disposal Site Name: Massachusetts Army National Guard
 450 Concord Avenue
 Cambridge, Massachusetts

DEP Release Tracking No. 3-13583

This Notice of Activity and Use Limitation ("Notice") is made as of this 22nd day of September, 2002, by the Office of the State Quartermaster of 50 Maple Street Milford, Massachusetts, together with its successors and assigns (collectively "Owner").

WITNESSETH:

WHEREAS, the Commonwealth of Massachusetts, is the owner in fee simple of those certain parcels of land located in Cambridge, Middlesex County, Massachusetts, with the buildings and improvements thereon, pursuant to two deeds recorded with the Middlesex County Registry of Deeds in Book 9038, Pages 388 to 390, and Book 9733, Pages 001 and 002;

WHEREAS, said parcel of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Middlesex County Registry of Deeds as Plan #000001008 recorded on September 23, 2002;

WHEREAS, the Property comprises all of a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site within the limits of the Property and to the extent such boundaries

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Refer to:
 BK 9038
 PG 388

Refer to:
 BK 9733
 PG 001

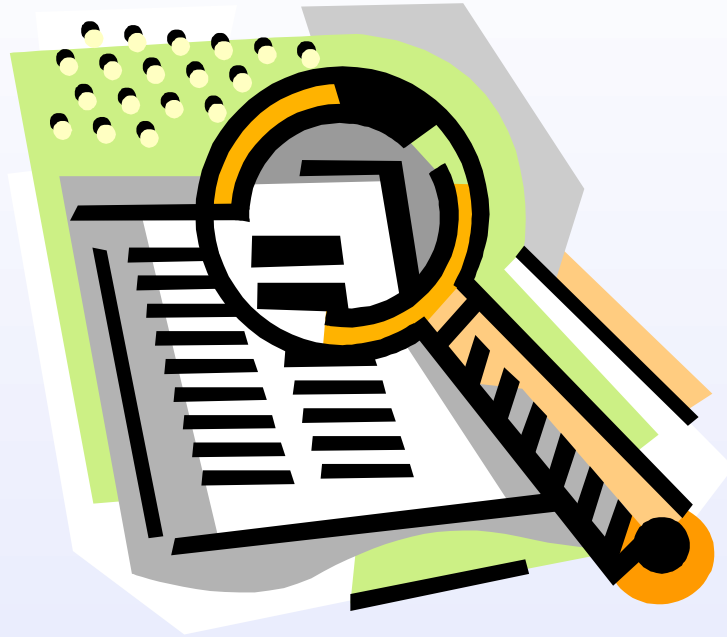
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AUDITS & ENFORCEMENT



AUDITS OF AULS

STATUTORY MANDATE

- M.G.L. c. 21E § 3A(0)
 - Mandates that MassDEP audit a minimum of 20% of all sites for which annual compliance assurance fees are required to be paid.
- Chapter 206 of the Acts of 1998 (“Brownfields” Legislation)
 - MassDEP shall perform a targeted audit on all sites at which an activity and use limitation has been implemented in order to ensure that response actions not overseen or conducted by the department are performed in compliance with chapter 21E and regulations promulgated thereunder. In the event the department determines that a targeted site is not in compliance with chapter 21E, it shall take any and all action it deems appropriate to enforce the provisions of said chapter.

REGULATORY REQUIREMENT

- 310 CMR 40.1100
 - MassDEP may initiate, at any time, a Random or Targeted Audit of any site subject to an Activity & Use Limitation.



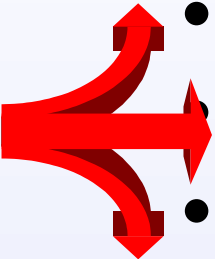
ENFORCEMENT OF AULS

STATUTORY MANDATE (1998 Brownfields)

- M.G.L. c. 21A § 16
 - Allows MassDEP to assess a civil administrative penalty up to \$25,000 per day for “failure to comply with the terms of an activity and use limitation” per c. 21E

Audit Focus

3 Components:

- 
- Technical Work [RAO*]
 - Legal Instrument [AUL Notice]
 - Obligation & Maintenance Conditions [AUL Notice]

* RAO = Response Action Outcome Statement or Close Out Report

Audit Goals & Tools

- File Review
 - 100% of Technical Work through **L1 AUDIT FORM**
 - 100% of Legal Instruments (NOTICE) through **L1 AUDIT FORM**
- Site Inspection
 - 50% of Obligation & Maintenance (O&M) Conditions through **L2 Audit**
- Comprehensively Review (Review + Inspection)
 - 20% of all components through **L3 Audit**



Technical Work Audit Criteria

Technical Adequacy of Response Action Outcome (RAO) documentation or End Point:

- Site Conditions
- Assessment
- Risk Characterization
- Source Elimination or Control
- Documentation



L1 Audit Form - RAO

RAOSCRN - Microsoft Word

File Edit View Insert Format Tools Table Window DEP Help Adobe PDF

Normal Arial 10 B I U

1 2 3 4 5 6 7 8

DEP SWMO RAO TECHNICAL SCREENING AUDIT FORM

Section I - General Information

1. **RAO ID:** _____

2. **RAO Name:** _____

3. **RAO Address:** _____

4. **RAO City:** _____

5. **RAO State:** _____

6. **RAO Zip:** _____

7. **RAO Phone:** _____

8. **RAO Fax:** _____

9. **RAO Email:** _____

10. **RAO Website:** _____

11. **RAO Owner:** _____

12. **RAO Operator:** _____

13. **RAO Manager:** _____

14. **RAO Supervisor:** _____

15. **RAO Assistant:** _____

16. **RAO Technician:** _____

17. **RAO Inspector:** _____

18. **RAO Auditor:** _____

19. **RAO Reviewer:** _____

20. **RAO Approver:** _____

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Technical Audit Results

- **50% of RAO's Required Follow-up Actions**
- **Follow-up Actions**
 - **40% More Work**
 - **10% Retraction**

Legal Instrument (NOTICE) Audit Criteria

- **Executed by the Owner**
- **Recorded or Registered**
- **Define AUL Area**
- **Permitted and Prohibited Activities**
- **Obligations and Maintenance Conditions**



L1 Audit Form – AUL NOTICE

Post-1999 AUL Screening checklist v8.01 - Microsoft Word

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POST-1999 AUL LEGAL INSTRUMENT COMPLIANCE SCREENING FORM

Checklist for Notice of Activity and Use Limitation (AUL) as amended through October 29, 1999 - Form 1075

NOTE: This checklist is intended to assist parties in preparing and implementing Notices of Activity and Use Limitation (AULs) on Form 1075. For ease of reference in using this checklist, each paragraph of the attached Form 1075 has been labeled or numbered. This checklist is intended solely as guidance, and is not a substitute for the regulations. Parties implementing AULs should carefully consult 310 CMR 40.0000 (the MCP), for general and specific regulatory requirements for AULs.

REQUIREMENTS FOR COMPLETING FORM 1075	Reference(s) to MCP Form	Notes
1. Is the current version of the Form 1075 being used? (Must be current at the time of recording)	40.1074(1)(a)	Is
2. Is the Form 1075 being used, except when alterations are allowed through bracketed language? Significant?	40.1074(1)(a)	A significant change?
3. Is the AUL legal instrument identified in the Header of Form 1075?	40.1074(2)(4)	Is
4. Is the DEP File and Tracking Number identified in the Header of Form 1075?	40.1074(2)(4)	Is
5. Does the Form identify, in Paragraph 1, the date on which the AUL was signed by the property owner?	Form 1075	Is
6. (a) the name(s) of the property owner(s) identified in the following location: Paragraph 1 Paragraph 2 Paragraph 21 (this paragraph may reference the property owner or an authorized representative)	40.1074(2)(b)	Is
7. (a) the name(s) of property owner(s) consistent in all locations?	Is	Is
8. If property owner(s) (a) is a corporation(s), is (a) the state(s) of incorporation identified in Paragraph 1?	Not applicable (property owner is not a corporation)	Is
9. (a) the address(es) of the property owner(s) identified in Paragraph 1?	Form 1075	Is
10. Does the Form identify, through use of bracketed language in Paragraph 2, whether land is vacant or improved?	Form 1075	Is
11. Is the address of the Property subject to the AUL identified (City/Town & County) in Paragraph 2?	40.1074(2)(a)	Is
12. In Paragraph 2, does the Form identify the owner's source of title (in deed, certificate of title, probate document)?	Form 1075	Is
13. In Paragraph 3, is reference made to a survey plan of the Property? (Indicate the form of reference below) - Registry of Deeds, Plan Book & Plan Number (if Property is registered land) - Land Commission (if Property is unregistered land)	40.1074(2)(a)	AUL
14. Is it clear that the AUL applies to the entire Property, or only to a portion of the Property? Entire Property Portion of the Property (check which applies)	40.1074(2)(a)	AUL

Version 08/01/01 draft

Page 1

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Legal Instrument (NOTICE) Audit Results

- 64% Required Follow-Up Actions
- Follow-Up Actions:
 - Failure to Define AUL Area
 - Not Authorized to Sign
 - Altered Notice (boilerplate in Regulations)
 - Language Unclear (e.g. “MCP speak”)



O&M Inspection Audit Criteria

- Are Site conditions maintained in accordance with the AUL?
 - Intended Use of Property
 - Exposure pathways eliminated




O&M Inspection Form

99AULAIF - Microsoft Word

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1 2 3 4 5 6 7



MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
XXXXXXXXXX Regional Office/Bureau of Waste Site Cleanup
Post-1999 AUL Audit Inspection Form

RELEASE TRACKING NUMBER

Y

Date:

Site Name:

Address:

Contact Person:

Phone:

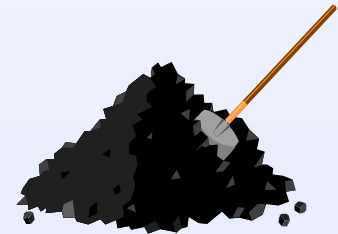
AUL INFORMATION (filled out by Screening Office Staff)	SITE RESULTS OF (filled out by Field Staff)
<p>Date AUL filed <input type="text"/> Description of AUL area as used at filing:</p> <p style="margin-left: 20px;"> <input type="checkbox"/> Building(s) <input type="checkbox"/> Driveway <input type="checkbox"/> Cap/Cover <input type="checkbox"/> Chemical/Leakage/etc. <input type="checkbox"/> Other: </p> <p>Additional description (relevant to the AUL area): <input type="text"/> </p>	<p>Boundaries of AUL area(s) identifiable? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Complex areas w/ multiple AUL area(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Evidence of recent contamination/disposal? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Evidence of recent construction? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Residential Waste present? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Indicators of potentially serious substances? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Other Notes: <input type="text"/> </p>
PERMITTED ACTIVITIES AND USES	OBSERVED ACTIVITIES AND USES
<p> <input type="checkbox"/> Residential <input type="checkbox"/> Driveway <input type="checkbox"/> School <input type="checkbox"/> Playground <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Excavation <input type="checkbox"/> Construction <input type="checkbox"/> Recreation <input type="checkbox"/> Other/Details/Conditions: </p>	<p> <input type="checkbox"/> Residential <input type="checkbox"/> Driveway <input type="checkbox"/> School <input type="checkbox"/> Playground <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Excavation <input type="checkbox"/> Construction <input type="checkbox"/> Recreation <input type="checkbox"/> Other/Details/Conditions: </p>
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INCONSISTENT/RESTRICTED ACTIVITIES AND USES	OBSERVED ACTIVITIES AND USES
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<p>VIOLATION OBSERVED: <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Possible</p>	
OBLIGATIONS AND CONDITIONS	OBSERVED CONDITIONS
<p> <input type="checkbox"/> Monitor Driveway <input type="checkbox"/> Monitor site improvements <input type="checkbox"/> Soil Management Plan <input type="checkbox"/> Health & Safety Plan <input type="checkbox"/> Monitor Signage/Access <input type="checkbox"/> Other/Details/Conditions: </p>	<p> <input type="checkbox"/> Parameters <input type="checkbox"/> Cap/Cover/Leakage <input type="checkbox"/> Signage/Access <input type="checkbox"/> Conditions: </p>
<p>VIOLATION OBSERVED: <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Possible</p>	
<p>AUL Status Audited in this form? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Additional Comments/Notes on Review Site: <input type="checkbox"/> No <input type="checkbox"/> Yes</p> <p>Completed by: <input type="text"/> Date: <input type="text"/></p>	<p>Additional Comments/Notes on Review Site: <input type="checkbox"/> No <input type="checkbox"/> Yes</p> <p>Completed by: <input type="text"/> Date: <input type="text"/></p>

Page 1 Sec 1 1/1 At 2.1" Ln 10 Col 1 REC TRK EXT OVR



O&M Inspection Audit Results

- 80%+ in compliance
- Problems Identified:
 - Failure to Maintain Pavement or Cap
 - Excavation in AUL Area



Long-Term Monitoring Program

- Developed an Internal “Re-inspection” Program
 - Intent to re-inspect sites every 5-years
 - And/or focus on “high concern” sites
 - Issue bi-annual inspection assignments based on last inspection date.

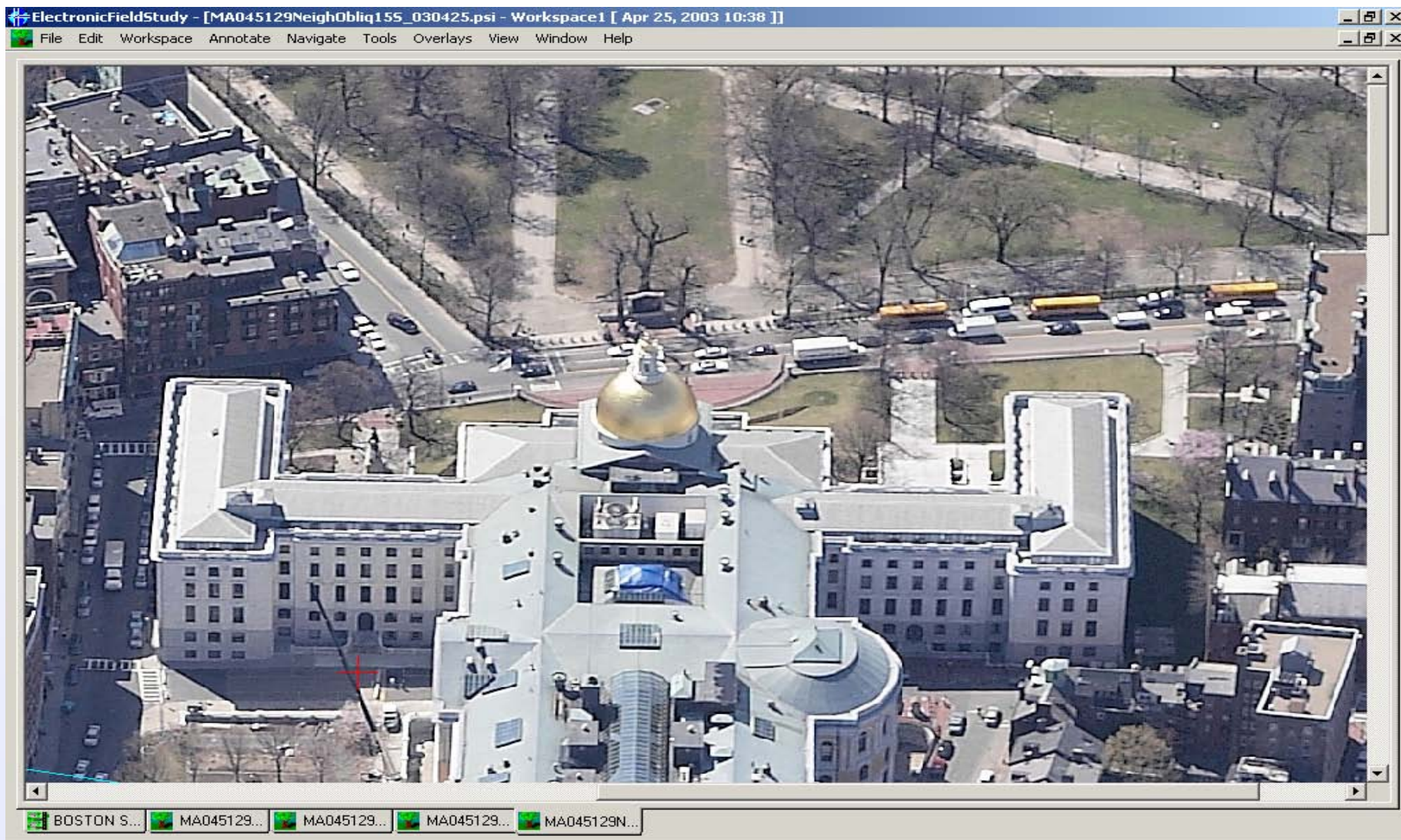


Monitoring Tools

- Re-use O&M Inspection Forms for on-going inspections
- Use Pictometry complimented by GIS for “desktop” inspections
 - 2003 flyover
 - Allows pre-inspections of site
 - Helps prioritize inspections and resources



Pictometry Example (April 2003)



Re-inspection Audit Results

- 24% identify violations
- Most common problem is “failure to comply with terms of AUL”, which are primarily compromised barriers (when required) such as pavement
- Although there is “Higher level enforcement” exposure (\$\$\$), mostly involves “lower level enforcement” (warning).



MA “Wish List”

- Improve Tracking & Public Access
- Require Funding for Future Maintenance (e.g. Paving)
- Increase Public Sector Roll
- Create AUL Permits
- Require Annual Reporting (e.g. ownership change)
- Include Dig Safe